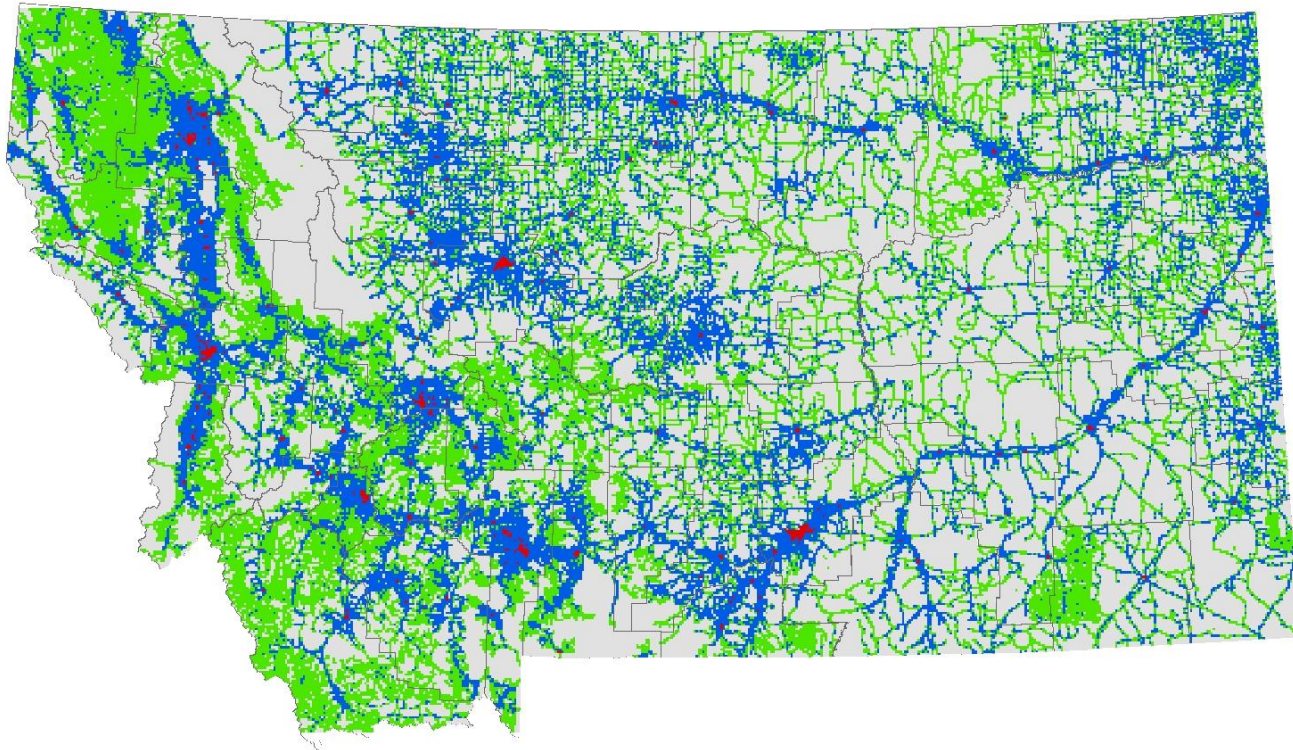
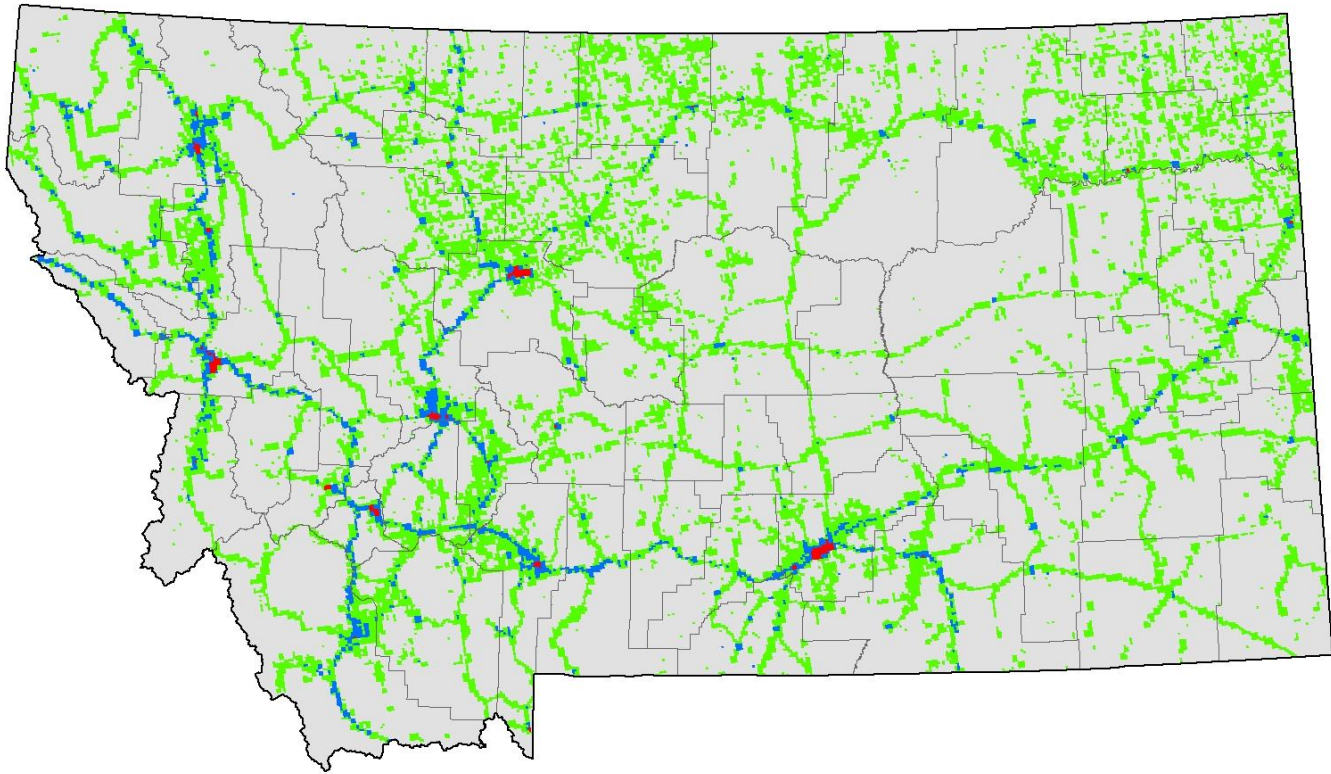


# MSL Baseline Coverage Objectives (partial)



# FirstNet Baseline Coverage Objectives









# Input Datasets

FirstNet	Montana State Library
2010 Census Block Population	2010 Census Block Population
High Risk Areas of Interest*	High Risk Areas of Interest*
National Highway and Traffic Counts	MDT Highway and Traffic Counts
2011 National Land Cover Dataset	2013 Montana Land Cover Framework
Public Safety User Density	Survey data
	9-1-1 call data (3-month averages)

# Input Datasets

- High Risk Areas of Interest (FirstNet)
  - **AmtrakStation**, Amusement\_and\_Theme\_Parks, **ANG\_Sites**, Arenas\_NBA, Arenas\_NHL, Biological\_Products\_Manufacturing, **CanMexBorderCrossings**, **Colleges\_Universities**, **Court\_Houses**, Ethanol Plants, Explosives\_Manufacturing, **FirstNetStateLocalGovBldg**, Natural Gas Compressor Stations, Natural Gas Processing Plants, Natural Gas Storage Facilities, **Hospitals**, Oil and Natural Gas Interconnects, Liquefied Natural Gas Facilities/Terminals, **Local Emergency Operations Centers**, NA\_CoalPowerPlants\_2005, Nitrogenous Fertilizer Plants, Nuclear\_US\_Plants, Phosphatic\_Fertilizer\_Plants, Ports, **PrivateSchools**, **PublicSchools2008**, Petroleum Pumping Stations, Raceways\_NASCAR, Oil Refineries, Stadiums\_MLB, Stadiums\_NCAA\_Div\_I\_Football, Stadiums\_NFL, **State\_EOCs**, **State\_Fairgrounds**, **StateGovernmentBuildings**, Major Thoroughbred Horse Racing Tracks, Indy Racing League (IRL) Racetracks, **Urgent Care Facilities**, **US\_dams**

# Input Datasets

- High Risk Areas of Interest (MSL)
  - Hospitals, outpatient clinics, nursing homes, long term care, public health offices
  - Law enforcement, fire, EMS, emergency shelters, EOCs, search & rescue
  - Court houses, corrections, military, local, state, federal, tribal facilities
  - Airports, heliports, rest stops, border crossings, railroad facilities, bus stations
  - Schools (K-12), colleges/universities
  - Dams, communications towers
  - County fairgrounds, rodeo grounds, ski areas

### 1b. Phased Deployment

**INSTRUCTIONS:** Provide a description of the proposed incremental deployment phases (suggest a minimum of 5) that would achieve the desired coverage objectives identified in 1a. As necessary, consider providing maps that clearly identify each incremental deployment phase.

**DELIVERABLE/FORMAT:** Word, PPT, PDF and, as necessary, maps in GIS compatible format (.shp, .info, .kml/.kmz, etc.)

Coverage Objective	Phased Deployment
• Objective 1	Phase →
• Objective 2	Phase →
• Objective 3	Phase →
• Objective 4	Phase →
• Objective 5	Phase →

SIGB Members: Based on the MSL baseline map of Montana, and other considerations you may have, you are being asked to prioritize coverage area priorities for build-out of FirstNet Public Safety LTE 4. To the right is an example of build-out priorities that you may or may not want to consider. The priorities and discussion listed are only meant to illustrate what you are being asked to do. I have included a road map slide to better orient the MSL Baseline Coverage Objectives Map. With continuing discussions with MSL, I may add a slide or two to this presentation by the August 11th SIGB Meeting.  
Dan Sullivan

The MSL generated baseline map displays more density of activity than the FN baseline map. The dense areas (red-high, blue-medium and green-low) are to be considered in recommending a minimum of 5 coverage objectives. By way of example, below please find some coverage objectives. You can use any or none of these examples. Where does your public safety discipline need coverage the most to least to serve and protect the public?

### Discussion:

The cities over 20,000 population have access to Commercial 4G LTE. Coverage of these towns is low hanging fruit for FN and its Contractor. Cities include Billings, Great Falls, Helena, Bozeman, Kalispell and Missoula. That being said, it is questionable how far existing coverage extends. For example, 4G is available on Last Chance Gulch but drops out at Fort Harrison.

1.

Conversion of existing 2 and 3G sites and core to 4G

Conversion of existing 2 and 3G sites would provide coverage for North east and North central Montana served by Neimont, Mid-Rivers and Triangle Communications. Such a priority would reduce the problem of small population Counties and Towns being left out because of lack of population.

2.

Coverage of 56 County Seats and 7 Tribal Government Headquarters.

County Seats have Sheriffs, Police, Fire, EMS, Courts, Emergency Management, public health and a hospital or clinic and County Commissions and Departments. Covering County Seats would provide continuity of government. The same can be said for Tribal Governments that operate social, judicial and emergency programs under the federal Indian Self Determination Act.

3.

Coverage of cities and towns with less than 20,000 population but more than 10,000 that are not in an existing coverage area.

4.

Coverage of cities and towns with less than 10,000 but more than 1,000 that are not in an existing

The number of Montana Cities and Towns needing coverage would be reduced by completing priorities 1 & 2.

5.

Coverage of cities and towns with less than 1,000 but more than 1.

6.

Montana Interstate Highways 90, 15, and 94; U.S. 2, 93, 89, 287, 12, 191, 87, 212 and Montana 200. In order of traffic density.

The federal and state highways are the "ganglee" that connects the cities and towns. 3 to 5 million tourists use the roads get to the National Parks in the summer and to destination ski hills in the winter. It is how trucking traffic moves goods and services. It is how cities and towns connect for high school and college athletics and cultural events.

7.

A robust system of deployables used for incidents, events, wild fires, floods and other natural disasters.

The Federal base line map indicates that Montana is 79% non-terrestrial. The MSL generated map estimates the State is 55% non-terrestrial. Satellite and deployables would be used to cover these areas. Generally, these areas are wilderness and/or un-occupied areas of the State.